Impact of the COVID-19 Pandemic on the Palestinian Family: A Community-Based Cross-Sectional Country-Level Online Survey

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Submitted to: JMIR Public Health and Surveillance
on: July 03, 2020

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Abstract

It is imperative to take lessons from the current COVID-19 Pandemic situation and to ensure that governments and local institutions have the knowledge to improve their actions. The current community-based cross-sectional descriptive study aims to better understand and assess more fully the consequences that the present COVID-19 pandemic is having on the Palestinian family using a structured online questionnaire which was distributed through a social media platform (Facebook) between 29 April 2020 and 5 June 2020. A total of 570 adults aged 18 years or over participated in the study. The vast majority of the study participants 549 (96.3%) reported that water supplies were not always available in the home during the period of the COVID-19 pandemic. However, paying attention to personal hygiene and home cleaning was more than usual before the announcement of the COVID-19 pandemic. In general, following the onset of the pandemic, around three-fourths of the study participants, 417 (73.2%) reported that the containment measures of the COVID-19 pandemic have put an additional burden on their families. There was a clear limitation in people's movement after the announcement of the COVID-19 pandemic. We suggest discussing the obtained results in focus groups with local and national stakeholders ensuring in knowledge translation towards the community.

(JMIR Preprints 03/07/2020:22105)
DOI: https://doi.org/10.2196/preprints.22105

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Abstract

It is imperative to take lessons from the current COVID-19 Pandemic situation and to ensure that governments and local institutions have the knowledge to improve their actions. The current community-based cross-sectional descriptive study aims to better understand and assess more fully the consequences that the present COVID-19 pandemic is having on the Palestinian family using a structured online questionnaire which was distributed through a social media platform (Facebook) between 29 April 2020 and 5 June 2020. A total of 570 adults aged 18 years or over participated in the study. The vast majority of the study participants 549 (96.3%) reported that water supplies were not always available in the home during the period of the COVID-19 pandemic. However, paying attention to personal hygiene and home cleaning was more than usual before the announcement of the COVID-19 pandemic. In general, following the onset of the pandemic, around three-fourths of the study participants, 417 (73.2%) reported that the containment measures of the COVID-19 pandemic have put an additional burden on their families. There was a clear limitation in people's movement after the announcement of the COVID-19 pandemic. We suggest discussing the obtained results in focus groups with local and national stakeholders ensuring in knowledge translation towards the community.

Keywords: COVID-19 pandemic; Containment Measures; Impacts; Palestinian family

1. Introduction

In December 2019, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), a novel coronavirus, emerged in Wuhan, China. Since then, the city of Wuhan has taken unprecedented measures in response to the outbreak, including extensive school and workplace closures [1].

COVID-19 has been considered a relative of a severe acute respiratory syndrome (SARS), which has the possibility of transmission from animals to humans [2]. Currently, it is still unclear when the pandemic will reach its peak. To date, the source of SARS-CoV-2 remains unknown. However, the SARS-CoV-2 infection has been associated with contact with a local seafood vendor in Wuhan that illegally sold some wildlife animals including bats [3].

COVID-19 struck the world, leaving governments and local institutions without solutions to ensure the continuity of citizens' lifestyles [4]. It is already fair to admit that the world is going to be a very different place once the pandemic is overtaken, not only as a result of its death toll but also of its social, economic, and political consequences [5].

Yingfei Zhang and Zheng Feei Ma 2020 have investigated the immediate impact of the COVID-19 pandemic on quality of life among local Chinese residents aged ≥18 years in China. They reported that the current COVID-19 pandemic was associated with a stressful impact in their study sample; since the COVID-19 pandemic is still ongoing, these findings need to be confirmed and investigated in future larger population studies and other societies. The study managed to capture some immediate positive and negative lifestyle impacts of the COVID-19 pandemic. The study has also suggested some important future research areas to assess the impact of COVID-19 pandemic on families and communities [6].

Worldwide, some recently published studies have reported the clinical symptoms of patients infected with COVID-19 and forecasted the spread of COVID-19 [7-9]. However, few studies have reported the impact of the COVID-19 pandemic on relationships with family and community [6].

In Palestine, even though the pandemic has moderately affected Palestine, the Palestine government

has taken various and different degrees of containment measures to mitigate the COVID-19 spread. These include complete or partial lockdown of cities and different levels of physical distancing and hygiene promotion activities [10]. Hence, this study aims to better understand and assess more fully the consequences that the current COVID-19 pandemic is having on the Palestinian family. It is imperative to take lessons from the current situation and to ensure that in future pandemics local and national authorities have the knowledge to improve their actions.

2. Materials and Methods

2.1 Study Design, setting, and period

The current community-based cross-sectional descriptive study was conducted in the Gaza Strip, West Bank, and East Jerusalem between 29 April 2020 and 5 June 2020.

2.2 Tool of the study

A structured online questionnaire was distributed through a social media platform (Facebook) to gather information about sociodemographic characteristics (10 items), living conditions at home (13 items), and impact of the COVID-19 pandemic on family (14 items). The questionnaire was developed based on the previous questionnaire developed by the University of Coimbra, Portugal, via the Health Geography Research Team at the Centre of Studies in Geography and Spatial Planning (CEGOT) [11]. The content validity of the questionnaire was checked by five specialists in the fields of public health, epidemiology, and biostatistics. To ensure the survey acceptability and consistency, a pilot study on 45 participants was carried out. Then, minor modifications were made according to the results of the pilot study.

2.3 Eligibility criteria

Only adults aged 18 years or over who were residing in the Gaza strip, West Bank, and East

Jerusalem during the period of the survey. To ensure that participants were still living in the above-mentioned regions, they were asked to provide the name of the governorate and neighborhood.

2.4 Sampling and sample size

The study participants were recruited using convenience and snowball sampling methods. The representative sample size in the current study was determined using the following formula [12].

$$Sample ¿(n¿) = \frac{Z^2_{1-\alpha/2} P(1-P)}{d^2} = \frac{(1.96)^2 (0.50)(1-0.50)}{(0.05)^2} = 384 \quad (1)$$

Where $Z_{1-\alpha/2}$ = Standard normal variate (Z value is 1.96 for a 95 percent confidence level). p = Response distribution (50%). d = Margin of error (5%).

Fortunately, a total of 570 adults aged 18 years or over have participated in our study by filling the online questionnaire.

2.5 Ethical consideration

The study protocol was approved by the Helsinki Ethical Committee in the Gaza Strip (Code: PHRC/HC/732/20). The participants were asked to approve their participation to proceed with the online survey. No monetary rewards were given for completing the questionnaire.

2.6 Data analysis

The Statistical Package for Social Science (SPSS) version 20 was used for data analysis. Descriptive statistics of frequency and percentage, and mean and standard deviation were performed for categorical and continuous variables, respectively. The independent samples t-test was applied to investigate the differences between means. The chi-square test was used to examine differences in the prevalence of different categorical variables. A *p*-value < 0.05 was considered statistically significant.

3. Results

3.1 Socio-demographic characteristics

A total of 570 adults aged 18 years or over participated in the current study. Of them, 258 (45.3%), 120 (21%), and 192 (33.7%) were residing in the Gaza strip, West Bank, and East Jerusalem, respectively. The overall mean age of the participants was 35.4±9.5. About 321 (56.3%) of the study participants were males and 249.0 (43.7%) were females. A predominant number of participants were married 432.0 (75.8%). The overall mean educational years were 14.6±5.7 years, indicating a high level of participant education. In terms of employment status, 48 (8.4%) of the participants were unemployed, 48 (8.4%) were university students, 444 (77.9%) were officers, and 30 (5.3%) were retired. The majority of participants 462 (81.1%) reported that they were residing in residential areas and 366 (64.2%) were living in separate apartments. The overall mean family size, presence of older persons over the age of 70 years at home, and presence of persons under the age of 12 years at home were 6.9±6.0, 0.7±5.9, 2.2±2.7, respectively.

Moreover, many socio-demographic items showed statistically significant differences between the Gaza strip, West Bank, and East Jerusalem at $p < 0.05$ (Table 1).

Table 1: Socio-demographic characteristics of the study participants by regions

Variables		Total (n=570)	Gaza Strip (n=258)	West Bank (n=120)	Jerusalem (n=192)	*P*-Value
		n (%)	n (%)	n (%)	n (%)	
Age (years)	Mean±SD	35.4±9.5	37.0±9.1	34.3±10.8	34.0±9.0	0.002
Gender	Male	321 (56.3)	228 (88.4)	24 (20.0)	69 (35.9)	0.001
	Female	249 (43.7)	30 (11.6)	96 (80.0)	123 (64.1)	
Marital status	Single	129 (22.6)	42 (16.3)	42 (35.0)	45 (23.4)	0.001
	Married	432 (75.8)	216 (83.7)	72 (60.0)	144 (75.0)	
	Divorced	9 (1.6)	0 (0.0)	6 (5.0)	3 (1.6)	
Years of education	Mean±SD	14.6±5.7	15.0±6.0	13.5±6.9	14.6±4.3	0.061
Employment status	Unemployed	48 (8.4)	21 (8.1)	9 (7.5)	18 (9.4)	0.120
	University student	48 (8.4)	18 (7.0)	6 (5.0)	24 (12.5)	
	Officer	444 (77.9)	201 (77.9)	99 (82.5)	144 (75.0)	
	Retired	30 (5.3)	18 (7.0)	6 (0.5)	6 (3.1)	
Nature of	Rural	96 (16.8)	39 (15.1)	27 (22.5)	30 (15.6)	

residence area	Residential	462 (81.1)	213 (82.6)	87 (72.5)	162 (84.4)	0.010
	Industrial	12 (2.1)	6 (2.3)	6 (5.0)	0 (0.0)	
Type of housing	Separate apartment	366 (64.2)	171 (66.3)	63 (52.5)	132 (68.8)	0.001
	Independent home or villa	195 (34.2)	87 (33.7)	57 (47.5)	51 (26.6)	
	Converted carriage house or tent	9.0 (1.6)	0 (0.0)	0 (0.0)	9 (4.7)	
Family size	Mean±SD	6.9±6.0	8.8±8.2	5.4±2.6	5.2±1.9	0.001
Older persons over the age of 70 years at home	Mean±SD	0.7±5.9	0.3±0.6	2.3±12.8	0.1±0.4	0.002
Persons under the age of 12 years at home	Mean±SD	2.2±2.7	3.1±3.6	1.40±1.4	1.43±1.4	0.001

Data are expressed as means ± SD for continuous variables and as percentages for categorical variables. The differences between means were tested by using the independent sample t-test. The chi-square test was used to examine differences in the prevalence of different categorical variables. A P-value of less than 0.05 was considered as statistically significant. SD, standard deviation.

3.2 The living conditions characteristics of family

Three hundred eighty-four participants stated that their homes had an external space and 246 (43.2%) and 141 (24.7%) of them reported that the kind outer spaces were the balcony and household garden, respectively. More than half of the participants 336 (58.9%) had no central heating or air conditioning system in their homes and more than half of them were residing in the Gaza strip 201 (59%). The vast majority of the study participants 549 (96.3%) reported that water supplies were not always available in the home during the period of the COVID-19 pandemic, of them, 246 (44.8%), 114 (20.8%), and 189 (34.4%) were residing in Gaza strip, West Bank, and East Jerusalem, respectively.

Most of the participants 522 (91.6%) indicated that all rooms in their homes had windows or ventilation systems, and 456 (80.0%) revealed that the natural light was enough to light the house on a sunny day. Only 192 (33.7%) pointed out that moisture or mold was on the walls or ceilings of their houses, 390 (68.4%) noted that they hear noise coming from neighbours or the street, 237 (41.6%) reported that power was not always available 24-hours a day in the house, of them, 216 (91.1%) were residing in the Gaza strip. Approximately three-fourths of the participants 414 (72.6%) testified that they had internet access 24-hours a day at home. The overwhelming majority of the

study participants 561 (98.4%) had a smartphone in their home and 384 (67.4%) had computers and laptops for family students to benefit from distance learning programs. The great majority of the participants 546 (95.8%) reported that they had a television in their home.

Furthermore, several living conditions items presented statistically significant differences between the Gaza strip, West Bank, and East Jerusalem at $p < 0.05$ (Table 2).

Table 2: The living conditions of the study participant's families by regions

Variables		Total (n=570)	Gaza Strip (n=258)	West Bank (n=120)	Jerusalem (n=192)	*P*-Value
		n (%)	n (%)	n (%)	n (%)	
Presence of an external space	Yes	384 (67.4)	153 (59.3)	90 (75.0)	141 (73.4)	0.001
	No	186 (32.6)	105 (40.7)	30 (25.0)	51 (26.6)	
Type of outer space	Balcony	246 (43.2)	108 (41.9)	60 (50.0)	78 (40.6)	0.001
	Household garden	141 (24.7)	48 (18.6)	30 (25.0)	63 (32.8)	
There is a central heating or air conditioning system	Yes	228 (40.0)	57 (22.1)	66 (55.0)	105 (54.7)	0.001
	No	336 (58.9)	201 (77.9)	51 (42.5)	84 (43.8)	
	Don't know	6 (1.1)	0 (0.0)	3 (2.5)	3 (1.6)	
Water is always available in the home	Yes	18 (3.2)	12 (4.7)	6 (5.0)	0 (0.0)	0.004
	No	549 (96.3)	246 (95.3)	114 (95.0)	189 (98.4)	
	Don't know	3 (0.5)	0 (0.0)	0 (0.0)	3 (1.6)	
All rooms at the home have windows or ventilation system	Yes	522 (91.6)	246 (95.3)	108 (90.0)	168 (87.5)	0.010
	No	48 (8.4)	12.0 (4.7)	12 (10.0)	24 (12.5)	
	Don't know	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	
Natural light is enough to light the house on a sunny day	Yes	456 (80.0)	213 (82.6)	99 (82.5)	144 (75.0)	0.058
	No	111 (19.5)	45 (17.4)	21 (17.5)	45 (23.4)	
	Don't know	3 (0.5)	0 (0.0)	0 (0.0)	3 (1.6)	
Moisture or mold on the walls or ceiling of the house	Yes	192 (33.7)	69 (26.7)	45 (37.5)	78 (40.6)	0.023
	No	363 (63.7)	180 (69.8)	72 (60.0)	111 (57.8)	
	Don't know	15 (2.6)	9 (3.5)	3 (2.5)	3 (1.6)	
Hear noise coming from neighbours or the street	Yes	390 (68.4)	183 (70.9)	72 (60.0)	135 (70.3)	0.002
	No	165 (28.9)	63 (24.4)	48 (40.0)	54 (28.1)	
	Don't know	15 (2.6)	12 (4.7)	0 (0.0)	3 (1.6)	
The electricity in the house is available 24-hours a day	Yes	330 (57.9)	42 (16.3)	111 (92.5)	177 (92.2)	0.001
	No	237 (41.6)	216 (83.7)	9 (7.5)	12 (6.2)	
	Don't know	3 (0.5)	0 (0.0)	0 (0.0)	3 (1.6)	
Internet access is available at home 24-hours a day	Yes	414 (72.6)	183 (70.9)	75 (62.5)	156 (81.2)	0.001
	No	153 (26.8)	75 (29.1)	42 (35.0)	36 (18.8)	
	Don't know	3 (0.5)	0 (0.0)	3 (2.5)	0 (0.0)	
You have a smartphone in your home	Yes	561 (98.4)	252.0 (97.7)	117 (97.5)	192 (100.0)	0.097
	No	9 (1.6)	6 (2.3)	3 (2.5)	0 (0.0)	
	Don't know	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	
Computers and laptops are	Yes	384 (67.4)	153 (59.3)	84 (70.0)	147 (76.6)	0.001
	No	174 (30.5)	102 (39.5)	36 (30.0)	36 (18.8)	

available at home for family students to benefit from TV is available at your home	Don't know	12 (2.1)	3 (1.2)	0 (0.0)	9 (4.7)	
	Yes	546 (95.8)	249 (96.5)	105 (87.5)	192 (100.0)	0.001
	No	24 (4.2)	9 (3.5)	15 (12.5)	0 (0.0)	
	Don't know	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	

Data are expressed as percentages for categorical variables. The chi-square test was used to examine differences in the prevalence of different categorical variables. A P-value of less than 0.05 was considered as statistically significant. SD, standard deviation.

3.3 The Impact of the COVID-19 pandemic on the families

Overall, following the onset of the pandemic, around three-fourths of the study participants, 417 (73.2%) reported that the containment measures of the COVID-19 pandemic have put an additional burden on their families. Only 54 (9.5%) of the participants mentioned that they have traveled to another area or outside the country since the COVID-19 pandemic has announced. Several reasons were mentioned for travel as following: business 21 (3.7%), tourism 6 (1.1%), medical treatment 6 (1.1%), family visit 12 (2.1%), and educational purposes 9 (1.6%). Regarding the mode of travel that was used, 27 (4.7%), 3 (0.5%), and 24 (4.2%) were traveled by plane, cruise ship, care, respectively. Only 72 (12.6%) of the study participants reported that they have undergone COVID-19 examination, out of them, only 6 (1.1%) got positive results, and all of them were residing in the West bank. A total of 183 (32.1%) of the participants reported that they subjected to quarantine following the onset of the pandemic, of them, 153 (26.8%), 27 (4.7%), and 3 (0.5%) were subjected to optional home quarantine (physical distancing), obligatory home quarantine, and mandatory quarantine in a healthcare center. In addition, 123 (21.6%) of those who were subjected to quarantine revealed that their family members were quarantined with them. The overall mean period of quarantine per day was 9.8±18.9, reflecting a short period of quarantine.

Besides, statistically significant differences between the overall mean times of going out home a week before and after the announcement of the COVID-19 pandemic at $p < 0.05$. There was a clear limitation in people's movement after the announcement of the COVID-19 pandemic. Since, the

mean times of going out home before and after the announcement of the COVID-19 pandemic for the following reasons have dropped significantly: to buy commodities (before 5.5±4.4 and after 2.5±2.7), to seek health care (before 1.3±2.1 and after 0.5±1.5), for work (before 4.7±2.6 and after 2.3±2.7), for hiking or physical activity (before 3.3±5.7 and after 0.7±1.6), and to assist vulnerable or dependent persons (before: 1.5±2.2 and after 0.7±2.1). Additionally, 261 (45.8%), 258 (45.3%), 9 (1.6%), and 42 (7.4%) mentioned that the primary mode of transportation before the COVID-19 pandemic was public transportation, private car, motorcycle, and walk on foot, respectively. After the announcement of the COVID-19 pandemic, 192 (33.7%) of the participants revealed that they stopped moving and switched working remotely from home, 66 (11.6%) stopped moving because they lost their job, 198 (34.7%) continued to use the same mode of transportation as before the COVID-19 pandemic, 36 (6.3%) decided to stop using public transportation, 45 (7.9%) decided to start using their private car, 30 (5.3%) decided to start hopping on foot, and 3 (0.5%) decided to start moving around by a motorbike. Concerning paying attention to personal hygiene and home cleaning, after the announcement of the COVID-19 pandemic, only 9 (1.6%) participants revealed less than usual before the pandemic, whereas 180 (31.6%) reported as usual before the pandemic and 381 (66.8%) indicated more than usual before the pandemic. When asked about interest frequency in following up on the latest developments about the COVID-19 pandemic, 279 (48.9%), 150 (26.3%), 141 (24.7%) of participants answered always, very often, and sometimes, respectively (Table 3).

Table 3. The Impact of the COVID-19 pandemic on the participant's families by regions

Variables	Total (n=570)	Gaza Strip (n=258)	West Bank (n=120)	Jerusalem (n=192)	*P*-Value
	n (%)	n (%)	n (%)	n (%)	
The containment measures of the Corona pandemic have put an additional burden on your family					
Yes	417 (73.2)	189 (73.3)	84 (70.0)	144 (75.0)	0.051
No	138 (24.2)	63 (24.4)	36.0 (30.0)	39 (20.3)	
Don't know	15 (2.6)	6 (2.3)	0 (0.0)	9 (4.7)	
Have you travelled to another area, outside your country since the COVID-19 Pandemic has announced					
Yes	54 (9.5)	33 (12.8)	15 (12.5)	6 (3.1)	

No		516 (90.5)	225 (87.2)	105 (87.5)	186 (96.9)	0.001
The reason for travel						
Business		21 (3.7)	15 (5.8)	3 (2.5)	3 (1.6)	0.001
Tourism		6 (1.1)	3 (1.2)	3 (2.5)	0 (0.0)	
Medical treatment		6 (1.1)	6 (2.3)	0 (0.0)	0 (0.0)	
Family visit		12 (2.1)	3 (1.2)	9 (7.5)	0 (0.0)	
For education		9 (1.6)	6 (2.3)	0 (0.0)	3 (1.6)	
Mode of travel which was used						
Plane		27 (4.7)	21 (8.1)	3 (2.5)	3 (1.6)	0.001
Cruise ship		3 (0.5)	0 (0.0)	3 (2.5)	0 (0.0)	
Care		24 (4.2)	12 (4.7)	9 (7.5)	3 (1.6)	
Have you done a coronavirus detection test?						
Yes		72 (12.6)	15 (5.8)	6 (5.0)	51 (26.6)	0.001
No		498 (87.4)	243 (94.2)	114 (95.0)	141 (73.4)	
The result of COVID-19 test						
Positive		6 (1.1)	0 (0.0)	6 (3.1)	0 (0.0)	0.001
Negative		66 (11.6)	15 (5.8)	45 (23.4)	6 (5.0)	
Have you been subject to quarantine?						
Yes		183 (32.1)	48 (18.6)	42 (35.0)	93 (48.4)	0.001
No		387 (67.9)	210 (81.4)	78 (65.0)	99 (51.6)	
Type of quarantine/isolation						
Optional home quarantine (physical distancing)		153 (26.8)	39 (15.1)	36 (30.0)	78 (40.6)	0.001
Obligatory home quarantine		27 (4.7)	6 (2.3)	6 (5.0)	15 (7.8)	
Mandatory quarantine in a healthcare center		3 (0.5)	3 (1.2)	0 (0.0)	0 (0.0)	
Have your family members been quarantined with you?						
Yes		123 (21.6)	27 (10.5)	30 (25.0)	66 (34.4)	0.001
No		60 (10.5)	21 (8.1)	12 (10.0)	27 (14.1)	
No quarantine		387 (67.9)	210 (81.4)	78 (65.0)	99 (51.6)	
The period of quarantine per day						
Mean±SD		9.8±18.9	6.5±18.4	13.8±23.6	11.8±15.2	0.001
Typically, how many times did you go out of the house a week before and after the announcement of the COVID-19 Pandemic, for the following reasons (Mean±SD)						
To buy commodities	Before	5.5±4.4	5.9±4.4	5.3±4.0	5.1±4.6	0.001
	After	2.5±2.7	2.9±3.1	2.3±1.8	2.2±2.6	
To seek health care	Before	1.3±2.1	0.9±1.4	1.3±1.1	1.9±3.0	0.001
	After	0.5±1.5	0.3±1.0	1.2±2.7	0.5±1.5	
For work	Before	4.7±2.6	4.8±2.9	4.9±2.2	4.4±2.4	0.001
	After	2.3±2.7	3.0±2.9	2.2±2.7	1.5±2.4	
For hiking or physical activity	Before	3.3±5.7	2.7±2.2	5.3±11.7	2.9±2.1	0.001
	After	0.7±1.6	0.8±1.7	1.0±1.9	0.4±1.2	
To assist vulnerable or dependent persons	Before	1.5±2.2	1.5±2.4	1.6±1.8	1.2±2.1	0.001
	After	0.7±2.1	0.8±2.5	0.9±1.9	0.6±1.5	
What was the primary mode of transportation that you were using on your daily travel (to go to work/study / do other daily activities) before the COVID-19 Pandemic?						
Public transportation		261 (45.8)	153 (59.3)	54 (45.0)	54 (28.1)	0.001
Private car		258 (45.3)	81 (31.4)	48 (40.0)	129 (67.2)	
Motorcycle		9 (1.6)	6 (2.3)	0 (0.0)	3 (1.6)	
Walk on the foot		42 (7.4)	18 (7.0)	18 (15.0)	6 (3.1)	
With the COVID-19 Pandemic, what changes have happened in the mode of your daily travel?						
I no longer move, because I witched working/studying remotely from home		192 (33.7)	51(19.8)	54 (45.0)	87 (45.3)	0.001
I no longer move, because I lost my job		66 (11.6)	18 (7.0)	12 (10.0)	36 (18.8)	
I continued to use the same mode of transportation as before		198 (34.7)	147 (57.0)	9 (7.5)	42 (21.9)	
I decided to stop using public		36 (6.3)	15 (5.8)	6 (5.0)	15 (7.8)	

transportation					
I decided to start using my private car	45 (7.9)	15 (5.8)	18 (15.0)	12 (6.2)	
I decided to start hopping on foot	30 (5.3)	9 (3.5)	21 (17.5)	0 (0.0)	
I decided to start moving around with a motorbike	3 (0.5)	3 (1.2)	0 (0.0)	0 (0.0)	
Paying attention to personal hygiene and home cleaning after the announcement of the COVID-19 pandemic					
Less than usual before the pandemic	9 (1.6)	6 (2.3)	0 (0.0)	3 (1.6)	0.004
As usual before the pandemic	180 (31.6)	63 (24.4)	51 (42.5)	66 (34.4)	
More than usual before the pandemic	381 (66.8)	189 (73.3)	69 (57.5)	123 (64.1)	
Do you follow up on information updates about the COVID-19 pandemic					
Always	279 (48.9)	123 (47.7)	63 (52.5)	93 (48.4)	0.657
Very often	150 (26.3)	75 (29.1)	27 (22.5)	48 (25.0)	
Sometimes	141 (24.7)	60 (23.3)	30 (25.0)	51 (26.6)	

Data are expressed as means ± SD for continuous variables and as percentages for categorical variables. The differences between means were tested by using the independent sample t-test. The chi-square test was used to examine differences in the prevalence of different categorical variables. A P-value of less than 0.05 was considered as statistically significant. SD, standard deviation.

4. Discussion

To the best of our knowledge, the current study was one of the first studies to be undertaken to better understand and assess more fully the consequences that the present COVID-19 pandemic is having on the Palestinian family. Since the COVID-19 pandemic is still ongoing, it is possible that the COVID-19 pandemic will put an extra burden on the worldwide families and Palestinian families are not spared of them. Our study presented that approximately three-fourths of the study participants reported that the containment measures of the COVID-19 pandemic have caused an excessive burden on their families. It is worth mentioning that local Palestinian authorities have taken various and different degrees of containment measures to contain the COVID-19 spread which was ranged from hygiene promotion activities to complete or partial lockdown of cities [9]. Our study outcomes were consistent with the results stated by Lau et al. who studied the quality of life for Hong Kong residents during the SARS epidemic in 2003 [13], and Zhang and Feei Ma who investigated the quality of life among Local Residents in Liaoning Province, China during COVID-19 Pandemic in 2020 [6].

It is interesting to note that our study showed statistically significant differences in many socio-demographic and living conditions items between the Gaza strip, West Bank, and East Jerusalem at $p < 0.05$. This result could be attributed to the contrast in the political, economic, demographics, and

living and humanitarian conditions between the three regions [14, 15].

The vast majority of the study participants revealed that water supplies were not always available in the home during the period of the COVID-19 pandemic. However, paying attention to personal hygiene and home cleaning was more than usual before the announcement of the COVID-19 pandemic, indicating the current awareness and perception level of the Palestinians regarding the seriousness and threat of COVID-19 and their level of worry and concern related to contracting the virus. Furthermore, 237 (41.6%) reported that electrical power was not always available 24-hours a day in the house, of them, 216 (91.1%) were residing in the Gaza strip. The previous finding from the same population was consistent with ours. Abuzerr and his colleagues reported that water and electrical power supplies were inadequate to meet the Palestinian family's demand [16-20].

The study indicated that a small number of the study participants reported that they have undergone to COVID-19 examination and only 183 (32.1%) of participants were subjected to quarantine which could be used as an indicator on the fragility and scarcity of the health system as there is a dire need for equipment, testing kits, personal protective equipment (PPE), and medications [21]

Our study also showed a marked limitation in the participant's movement and using public transportation after the announcement of the COVID-19 pandemic. Since the mean times of going out home before and after the announcement of the COVID-19 pandemic have dropped significantly at $p < 0.05$. These findings were consistent with the results of community-based studies from different parts of the world, which indicated a positive attitude of the public towards social-distancing, avoiding travel, and hinging out [22-24].

After the announcement of the COVID-19 pandemic, 192 (33.7%) of our study participants reported that they stopped moving and switched working remotely from home, this result confirms that the COVID-19 increases labor market inequalities as the economic consequences of this pandemic were larger for certain occupations. Individuals in occupations working in proximity to others are more probably affected, while occupations able to work remotely are less affected [25].

About 11.6% percent of the study participants stopped moving because they lost their jobs. This result was consistent with the preliminary view carried out by Coibion et al., to characterize how re being affected by the COVID-19 pandemic. The review expected that job loss will be significantly larger than implied by new unemployment claims and many of those losing jobs will not actively look to find new ones [26].

Additionally, the study conducted by Brynjolfsson et al. revealed that about 10.1% of the US population laid-off or furloughed since the start of COVID-19 [27]. Furthermore, the deterioration of the family's financial situation during the pandemic could be associated with some avoidance behaviors, which would worsen people's mental health and lead to a more passive lifestyle [28, 29].

Around half of the study participants reported that they were always interested in following up on the latest updates of the COVID-19 pandemic, indicating that the COVID-19 pandemic may be stressful for the Palestinian people. Therefore, we strongly recommend psychologists and social workers to play their crucial role in promoting the society member's mental health during and after the pandemic. This online community-based cross-sectional study has many strengths. First, as above mentioned that this study is one of the first studies aimed to better understand the consequences of the present COVID-19 pandemic on the Palestinian family. Second, the sample size of the study was relatively large and representative. Third, this study could be considered as a country-level study as it was included and compared the three Palestinian areas, the Gaza strip, West Bank, and East Jerusalem. Fourth: this study was carried out during undertaken various and different degrees of containment measures to mitigate the COVID-19 spread in Palestine.

However, the results should be interpreted in light of certain limitations. To begin with, our study suffered from the convenience sampling method, which limited the generalization of our findings to the whole Palestinian regions. In our point of view, a cluster random sampling method by distributing the sample into three areas based on the number of inhabitants residing in each of region is a better sampling method, in this case, however, it was impossible to achieve it using the online

survey because we could not select the participant's regions. Besides, the impacts COVID-19 pandemic on the participant's mental health were not examined in this study. Accordingly, future studies to investigate the consequences of the COVID-19 pandemic on Palestinian families that were not included in this study are recommended.

5. Conclusion and recommendation

Our study managed to capture some immediate impacts of the COVID-19 pandemic on Palestinian families residing in the Gaza strip, West Bank, and East Jerusalem. The containment measures of the COVID-19 pandemic have put an additional burden on the Palestinian families. The COVID-19 pandemic was associated with the limitation of the Palestinian people's movement. Despite water supplies were not always available in the homes during the period of the COVID-19 pandemic, paying attention to personal hygiene and home cleaning was more than usual before the announcement of the COVID-19 pandemic. We suggest discussing the obtained results in focus groups with local and national stakeholders ensuring in knowledge translation towards the community. The findings can support the design of regional and spatial measures during a future pandemic crisis aimed at promoting healthier communities and better living conditions with an impact on physical health.

Abbreviations

COVID-19: Coronavirus disease in 2019; SARS: Severe acute respiratory syndrome; SARS-CoV-2: Severe acute respiratory syndrome, coronavirus 2; PPE: Personal protective equipment; SD: Standard deviation.

Data Availability

The data used to support the findings of this study are available from the corresponding author upon request.

Conflicts of Interest

The authors declare that there are no conflicts of interest regarding the publication of this paper.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Authors' Contributions

SA, KZ, and AS participated in idea conception, proposal development, design of the study, and data collection. AB and AA performed the statistical analysis and drafted the manuscript. AAD and AS participated in the draft review. All authors have read and approved the final version of the manuscript and agree with the order of presentation of the authors.

Acknowledgments

The authors are grateful to the Palestine Academy for Sciences and Technology (PALAST) for publishing the study survey on the PALAST Facebook website. The authors also wish to thank the study participants for their valuable participation in this study.

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